

AMENDMENTS TO THE SPECIFICATION

Please replace Paragraph [0012] with the following paragraph rewritten in amendment format:

[0012] Due to the relative high cost of PET material, even slight increases in the weight of the material of the container will result in an excessive increase in its cost, making it less competitive in relation to the glass bottle, thereby resulting in the infeasibility of such a solution to the problem. Additionally, in many instances, container weight is correlated to the amount of the final vacuum present in the container after this fill, cap and cool down procedure. In order to reduce container weight, i.e., "lightweight" the container, thus providing a significant cost savings from a material standpoint, the amount of the final vacuum must be reduced. Typically, the amount of the final vacuum can be reduced through various processing options such as the use of nitrogen dosing technology or reduce fill temperatures. One drawback with the use of nitrogen dosing technology however is that the ~~minimum~~ maximum line speeds achievable with the current technology is limited to roughly 200 containers per minute. Such slower line speeds are seldom acceptable. Additionally, the dosing consistency is not yet at a technological level to achieve efficient operations. Reducing fill temperatures limits the type of commodity capable of being used and thus is equally disadvantageous.

Please add the following paragraph.

[0030.1] FIG. 7 is a cross-sectional view of the container taken generally along the line 7-7 of FIG. 6, the container being filled, sealed and under top load forces.

Please replace Paragraph **[0031]** with the following paragraph rewritten in amendment format:

[0031] FIG. ~~7~~ 8 is a graph comparing the vacuum pressures of a current stock container with that of a container embodying the principles of the present invention.

Please replace Paragraph **[0032]** with the following paragraph rewritten in amendment format:

[0032] FIG. ~~8~~ 9 is a graph comparing the top load force capabilities of a current stock container with that of a container embodying the principles of the present invention.

Please replace Paragraph **[0035]** with the following paragraph rewritten in amendment format:

[0035] Referring now to the drawings, there is depicted a hot fillable, blow molded plastic container 10 embodying the principles and concepts of the present invention. The container 10 of the present invention illustrated in ~~FIGS. 1-6~~ FIGS. 1-7 is particularly suited for hot fill packaging of product, typically a liquid or beverage, while the product is in a heated state. The container 10 has also been specifically designed for retaining a commodity during a thermal process, such as a high-temperature pasteurization or retort. The container 10 may also be used for retaining a commodity during other thermal processes as well. The container 10 can be filled by automated, high speed hot fill equipment known in the art. After filling, the container is sealed and cooled. The unique construction of the container 10 enables it to accommodate vacuum-induced volumetric shrinkage caused by hot filling and provide enhanced top load strength capabilities. While designed for use in hot fill or thermal process

applications, it is noted that the container 10 is also acceptable for non-hot fill or non-thermal process applications. The teachings of the present invention are more broadly applicable to a large range of plastic containers.

Please replace Paragraph [0037] with the following paragraph rewritten in amendment format:

[0037] As illustrated in ~~FIGS. 1-6~~ FIGS. 1-7, the plastic container 10 of the present invention generally includes a finish 12, a shoulder region 14, a waist region 16, a sidewall portion 18 and a base 20.

Please replace Paragraph [0053] with the following paragraph rewritten in amendment format:

[0053] As illustrated in FIG. 3, in cross-section, the waist region 16 has a generally rounded triangular appearance. The construction of the waist region 16 creates and provides increased vertical strength to the container 10 by transferring top load forces throughout the container 10, thereby enhancing the top load strength capabilities of the container 10, by aiding in the prevention of creasing and buckling of the container 10 when subjected to top load forces. The generally rounded triangular appearance, in cross-section, of the waist region 16, allows the waist region 16 to collapse when subjected to excessive top load forces without significantly denting or deforming. As illustrated in FIG. 7, in cross-section, the waist region 16, when subjected to top load forces, takes on a more generally traditional triangular shaped appearance. Thereafter, once the excess top load forces have been removed, the waist region 16 of the container 10 “rebounds” and returns to its original, uncompromised

position, function and appearance. Compare FIG. 3, the container 10 not subjected to top load forces with FIG. 7, the container 10 subjected to top load forces.

Please replace Paragraph [0057] with the following paragraph rewritten in amendment format:

[0057] Referring now to the graph illustrated in FIG. 7 8, the significant benefit of the present invention through the reduction of negative pressure or vacuum is exhibited. As previously discussed, the less negative pressure or vacuum the container is subjected to, the greater the ability to lightweight the container. As illustrated, the current nominal twenty (20) fluid ounce stock control container, weighing approximately 38 grams, exhibits a maximum negative pressure or vacuum, prior to sidewall buckle, of approximately 280 mm Hg. While for the same amount of volume displacement, the container 10, having a nominal volume capacity of twenty (20) fluid ounces, weighing approximately 30 grams and having vacuum panels 38, exhibits a maximum negative pressure or vacuum, prior to sidewall buckle, of approximately 120 mm Hg. Accordingly, as is shown in FIG. 7 8, the container 10 having vacuum panels 38 can displace the same amount of volume as the current stock control container at a significantly lower negative pressure or vacuum thus allowing for the container 10 having vacuum panels 38 to be significantly lightweighted. The test data exhibited in FIG. 7 8 is associated with a container having three (3) vacuum panels 38. Each vacuum panel 38 offers a reduction in negative pressure or vacuum. The three (3) significant drops in negative pressure or vacuum from peaks 96 correspond to each vacuum panel 38 separately deflecting radially inward. As each vacuum panel 38

defects radially inward, the amount of negative pressure or vacuum is shown to drop significantly.

Please replace Paragraph [0059] with the following paragraph rewritten in amendment format:

[0059] Referring now to the graph illustrated in FIG. 8 9, the benefit of the present invention through a significant relative increase in top load strength capabilities is exhibited keeping in mind that the stock control container weighs approximately 38 grams, while the test container 10 weighs approximately 30 grams. Both containers are not filled to their nominal capacity and sealed. Those skilled in the art would expect the twenty (20) fluid ounce test container 10, which is significantly lighter in weight than the stock control container, to provide substantially poorer top load performance. Initially, the graph illustrated in FIG. 8 9 supports that expectation; however, once the waist buckles in the heavier control container, the top load performance drops significantly to that nearly the same as the lighter weight test container 10. On the other hand, the top load strength capability of the test container 10 shows a remarkably smooth transition relative to the control container. This smooth transition exhibited in the container 10 provides a significant advantage. In any warehousing situation, a double-stacked pallet having hundreds of containers, places a significant top load force on the containers found in the bottom pallet from the weight of the filled containers above. Unfortunately, containers exhibiting top load performance like that of the control container illustrated in FIG. 8 9, where the waist buckle causes a significant drop in performance, do not fail or buckle at the same time. Accordingly, some of the containers will buckle before others thus causing the double stack of pallets to become unstable and topple. Furthermore,

even without toppling, the containers at the bottom will likely deform or dent permanently causing the containers to take-on an unsightly appearance when on the grocer's display shelf that in turn may cause consumers to avoid purchasing the product. On the other hand, the smooth transitional top load performance of the container 10 is less likely to become unstable and topple when stacked in a warehouse and less likely to cause any unsightly deformations or dents that would dissuade consumer purchases.

Please replace Paragraph [0060] with the following paragraph rewritten in amendment format:

[0060] The above-described smooth transition is a result of several of the above-described features of the container 10 working together. One component of this smooth transition is the action of the vacuum panels 38 that invert and deflect radially inward as the container 10 reacts to vacuum related forces. When the container 10 is filled and sealed, application of top load forces causes pressure against the product contained within the container 10, which causes the inverted vacuum panels 38 to revert to their outward as formed position. A region 97 along the graph illustrated in FIG. 8 9 of the test container 10 shows the vacuum panels 38 reverting. With removal of the top load forces, the vacuum panels 38 return to their inverted or deflected radially inward position. Thus, the above-described similar feature working in opposite direction phenomenon increases the top load strength capabilities of the container 10. Accordingly, as illustrated, after the waist buckle of the stock control container, the heavier stock control container and the lighter test container 10, for the same relative amount of vertical displacement, withstand a similar amount of top load forces.